



Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2019	KH3XL2.22TF4	2.216	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Indirect Diesel Injection, Engine Control Module, Turbocharger, Exhaust Gas Recirculation, Oxidation Catalyst, Periodic Trap Oxidizer			Loader, Tractor, Other Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT	--	--	4.4	1.2	0.002	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 30 day of August 2018.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

ATTACHMENT 1 OF 1

Engine Model Summary Template

U-R-026-0512

7/26/2018

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
KH3XL2.22TF4	EP54/2600	404F-22T	53.6@2600	39.6	22.6	192.0@1800	49.0	19.4	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	EP56/2600B	404F-22T	55.7@2600	40.0	22.8	185.0@1800	47.0	18.6	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	EP60/2800	404F-22T	60.0@2800	42.0	25.8	192.0@1800	49.0	19.4	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	EP61/3000	404F-22T	61.0@3000	40.1	26.4	192.0@1800	47.8	18.9	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	EP54/2600	C2.2T	53.6@2600	39.6	22.6	192.0@1800	49.0	19.4	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	EP56/2600B	C2.2T	55.7@2600	40.0	22.8	185.0@1800	47.0	18.6	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	EP60/2800	C2.2T	60.0@2800	42.0	25.8	192.0@1800	49.0	19.4	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	EP61/3000	C2.2T	61.0@3000	40.1	26.4	192.0@1800	47.8	18.9	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	4T43-28	N844LT-F	58.2@2800	40.5	24.9	186.0@1800	46.7	18.2	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	EP61/3000US	404F-22T	61.0@3000	40.1	26.4	192.0@1800	47.8	18.9	EM, IFI, TC, EGR, ECM, PTOX, OC
KH3XL2.22TF4	EP61/3000US	C2.2T	61.0@3000	40.1	26.4	192.0@1800	47.8	18.9	EM, IFI, TC, EGR, ECM, PTOX, OC